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What is claimed is:

1		1.	A me	ethod of preparing cellulose ethers comprising the steps of:
2			(a)	obtaining mercerized and recovered cellulose pulp; and
3			(b)	converting the mercerized and recovered cellulose pulp into
4	the cellulose	ethers,		
5	wherein the n	nerceri	zed cell	ulose pulp in step (a) was mercerized with a cellulose II
6	mercerizing a	igent, t	he cellu	lose pulp is southern softwood kraft, the mercerized and
7	recovered cellulose pulp has a TAPPI 230 om-89 viscosity of at most 12 cP, and when the			
8	cellulose ethe	er prep	ared is h	hydroxyethyl cellulose, the mercerized and recovered cellulose
9	pulp has at le	ast one	of the	following properties:
10	(i)	a TA	PPI 230	om-89 viscosity less than 10.4 cP or greater than 11.2 cP,
11	(ii)	a sol	ubility i	n 10% sodium hydroxide as determined by ASTM D 1696-95
12	of greater than 2.3%,			
13	(iii)	a sol	ubility i	n 18% sodium hydroxide as determined by ASTM D 1696-95
14	of greater tha	n 1.3%	ó,	
15	(iv)	not b	een pre	hydrolyzed, or
16	(v)	not b	een ble	ached with elemental chlorine.
1		2.	The 1	method of claim 1, wherein the cellulose ether prepared is
2	hydroxyethyl cellulose and the mercerized and recovered cellulose pulp has a TAPPI 230			
3	om-89 viscos	sity les	s than 9	.25 cP.
1		3.		method of claim 2, wherein the cellulose ether prepared is
2	hydroxyethyl cellulose and the mercerized and recovered cellulose pulp has a TAPPI 230			
3	om-89 viscos	sity les	s than 8	cP.
1		4.		method of claim 1, wherein the mercerized and recovered
2	cellulose pul	p has a	TAPPI	230 om-89 viscosity less than 9.25 cP.
1		5	The	method of claim 4, wherein the mercerized and recovered
1		5.	1116	memor of claim 4, wherein the mercenzed and recovered

cellulose pulp has a TAPPI 230 om-89 viscosity less than 8 cP.

1	6. The method of claim 1, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-
3	95 of greater than 3.0%.
1	7. The method of claim 6, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-
3	95 of greater than 5.0%.
1	8. The method of claim 1, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-
3	95 of greater than 2.0%.
1	9. The method of claim 8, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-
3	95 of greater than 4.0%.
1	10. The method of claim 1, wherein the cellulose pulp is not
2	regenerated cellulose pulp.
1	11. The method of claim 1, wherein the mercerized and recovered
2	cellulose pulp is a cellulose floc.
1	12. The method of claim 1, wherein step (a) comprises:
2	(i) mercerizing cellulose pulp; and
3	(ii) washing, neutralizing, or neutralizing and washing
4	the mercerized cellulose pulp.
1	13. The method of claim 12, wherein the cellulose pulp in step (a)(i) is
2	mercerized with an aqueous solution containing from about 9 to about 24% by weight of
3	sodium hydroxide, based upon 100% weight of total aqueous solution.

1	14. The method of claim 13, wherein the cellulose pulp in step (a)(i) is
2	mercerized with an aqueous solution containing from about 13 to about 24% by weight of
3	sodium hydroxide, based upon 100% weight of total aqueous solution.
1	15. The method of claim 1, wherein step (a) comprises:
2	(i) mercerizing cellulose pulp; and
3	(ii) washing the mercerized cellulose pulp.
1	16. The method of claim 12, wherein the mercerized cellulose pulp in
2	step (a)(ii) is washed with an aqueous solution.
1	17. The method of claim 16, wherein the washing step is continued
2	until the residual water has a pH of less than about 10.
1	18. The method of claim 16, wherein step (a) further comprises (iii)
2	drying the mercerized and washed, neutralized, or washed and neutralized cellulose pulp.
1	19. The method of claim 18, wherein the mercerized and dried cellulose
2	pulp contains less than about 20% by weight of moisture content, based upon 100% weight
3	of total cellulose pulp and water.
1	20. The method of claim 1, wherein step (a) comprises:
2	(i) treating cellulose pulp to form a cellulose floc;
3	(ii) mercerizing the cellulose floc; and
<i>3</i>	(iii) washing, neutralizing, or neutralizing and washing
5	the mercerized cellulose floc.
,	the mercenzed controls not.
1	21. The method of claim 1, wherein the mercerized and recovered
2	cellulose pulp is substantially free of cellulose III.

1	22. T	he method of claim 1, wherein the mercerized and recovered
2	cellulose pulp contains	less than about 3.5% by weight of mercerizing agent, based upon
3	100% by weight of cellu	alose pulp and mercerizing agent
1	23. T	The method of claim 22, wherein the mercerized and recovered
2	cellulose pulp contains	less than about 0.3% by weight of mercerizing agent, based upon
3	100% total weight of ce	llulose pulp and mercerizing agent.
1	24. T	The method of claim 23, wherein the mercerized and recovered
2	cellulose pulp contains	less than about 0.03% by weight of mercerizing agent, based upon
3	100% total weight of ce	ellulose pulp and mercerizing agent.
1	25. Т	The method of claim 1, wherein the mercerized and recovered
2	cellulose pulp has an R	x value of greater than 0.57.
1	26 . T	The method of claim 25, wherein the mercerized and recovered
2	cellulose pulp has an R	x value of greater than 0.60.
1	27.	The method of claim 26, wherein the mercerized and recovered
2	cellulose pulp has an R	x value of greater than 0.64.
1	28.	The method of claim 1, wherein the mercerized and recovered
2	cellulose pulp has at les	ast about 20% by weight of cellulose II, based upon 100% total
3	weight of the crystallin	e portion of the mercerized cellulose pulp.
1	29.	The method of claim 1, wherein the mercerized and recovered
2	cellulose pulp has a tot	al crystallinity of less than about 60% by weight, based on 100%
3	weight of total cellulos	e pulp.
1	30.	The method of claim 1, wherein step (b) comprises converting the
2	mercerized cellulose p	ulp into the cellulose ethers via a cellulose floc intermediate.

1	31.	The method of claim 30, wherein step (b) comprises:
2		(i) treating the mercerized and recovered cellulose pulp
3	to form a cellulose f	loc;
4		(ii) alkalating the cellulose floc to form an alkali
5	cellulose; and	
6		(iii) etherifying the alkali cellulose to form the cellulose
7	ethers.	
1	32.	The method of claim 31, wherein step (b)(i) comprises grinding,
2	dicing, or shredding	the mercerized cellulose pulp to form the cellulose floc.
1	33.	The method of claim 31, wherein step (b)(ii) comprises treating the
2	cellulose floc with a	n alkalating agent.
1	34.	The method of claim 33, wherein the alkalating agent is an alkali
2	metal hydroxide.	
1	35.	The method of claim 31, wherein step (b)(iii) comprises reacting the
2	alkali cellulose with	an etherification agent to form the cellulose ethers.
	26	Till 1. C. 1. ' 25 miles with a sthesification agent comprised
1	36.	The method of claim 35, wherein the etherification agent comprises
2	sodium monochloro	vacetate.
1	37.	The method of claim 11, wherein step (b) comprises:
2	57.	(i) alkalating the cellulose floc to form an alkali
3	cellulose; and	(-)
4	- 3	(ii) etherifying the alkali cellulose to form the cellulose
5	ethers.	, ,

1		38.	The method of claim 1, wherein the cellulose ether is a
2	carboxymethy	l cellul	ose.
1 2	cellulose.	39.	The method of claim 1, wherein the cellulose ether is a methyl
1 2	ether.	40.	The method of claim 1, wherein the cellulose ether is a nonionic
1		41.	The method of claim 1, wherein the cellulose ether is an ionic ether.
1 2	38.	42.	A carboxymethyl cellulose ether prepared by the method of claim
1		43.	A methyl cellulose ether prepared by the method of claim 39.
1		44.	A nonionic cellulose ether prepared by the method of claim 40.
1		45.	An ionic cellulose ether prepared by the method of claim 41.
1 2		46.	A method of preparing cellulose floc comprising the steps of: (a) obtaining mercerized and recovered cellulose pulp, and
3			(b) treating the mercerized pulp to form the cellulose floc,
4	wherein the c	ellulose	pulp is southern softwood kraft and the mercerized and recovered
5	cellulose pulp	is sub	stantially free of cellulose III and has a TAPPI 230om-89 viscosity of
6	at most 12 cP		
1		47.	The method of claim 46, wherein the mercerized and recovered
2	cellulose pulp	nas a	ΓAPPI 230 om-89 viscosity less than 10.4 cP or greater than 11.2 cP.

- -48-1 48. The method of claim 47, wherein the mercerized and recovered 2 cellulose pulp has a TAPPI 230 om-89 viscosity less than 9.25 cP. 49. The method of claim 48, wherein the mercerized and recovered 1 2 cellulose pulp has a TAPPI 230 om-89 viscosity less than 8 cP. 1 50. The method of claim 46, wherein the mercerized and recovered cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-2 3 95 of greater than 2.3%. 51. The method of claim 50, wherein the mercerized and recovered 1 2 cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-3 95 of greater than 3.0%. 1 52. The method of claim 51, wherein the mercerized and recovered 2 cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-3 95 of greater than 5.0%. 1 53. The method of claim 46, wherein the mercerized and recovered 2 cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-3 95 of greater than 1.3%. 1 54. The method of claim 53, wherein the mercerized and recovered cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-2 3 95 of greater than 2.0%.
- 55. The method of claim 54, wherein the mercerized and recovered 1 2 cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-3 95 of greater than 4.0%.

1	56.	The method of claim 46, wherein the mercerized and recovered	
2	cellulose pulp has not l	been prehydrolyzed.	
1	57.	The method of claim 46, wherein the mercerized and recovered	
2		been bleached with elemental chlorine.	
1	58.	The method of claim 46, wherein step (a) comprises:	
2		(i) mercerizing cellulose pulp; and	
3		(ii) washing, neutralizing, or neutralizing and washing	
4	the mercerized cellulos	se pulp.	
1	59.	The method of claim 46, wherein the mercerized and recovered	
2	cellulose pulp contains	s less than about 3.5% by weight of mercerizing agent, based upon	
3		lulose pulp and mercerizing agent	
1	60.	The method of claim 59, wherein the mercerized and recovered	
2	cellulose pulp contains	s less than about 0.3% by weight of mercerizing agent, based upon	
3	100% total weight of	cellulose pulp and mercerizing agent.	
1	61.	A cellulose floc prepared by the method of claim 46.	
1	62.	A method of preparing mercerized cellulose floc comprising the	
2	steps of:		
3		(a) mercerizing the cellulose floc; and	
4		(b) recovering the mercerized cellulose floc,	
5	wherein the mercerize	ed and recovered cellulose floc is substantially free of cellulose III,	
6	the cellulose floc is derived from southern softwood kraft, and the mercerized and		
7	recovered cellulose flo	oc has a TAPPI 230 om-89 viscosity of at most 12 cP.	
1	63.	The method of claim 62, wherein the mercerized and recovered	
2	cellulose floc has a T.	APPI 230 om-89 viscosity less than 10.4 cP or greater than 11.2 cP.	

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95 of greater than 4.0%.

The method of claim 63, wherein the mercerized and recovered 64. 1 cellulose floc has a TAPPI 230 om-89 viscosity less than 9.25 cP. 2 The method of claim 64, wherein the mercerized and recovered 65. 1 cellulose floc has a TAPPI 230 om-89 viscosity less than 8 cP. 2 The method of claim 62, wherein the mercerized and recovered 1 66. cellulose floc has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-2 3 95 of greater than 2.3%. The method of claim 66, wherein the mercerized and recovered 67. 1 cellulose floc has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-2 3 95 of greater than 3.0%. The method of claim 67, wherein the mercerized and recovered 68. 1 cellulose floc has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-2 3 95 of greater than 5.0%. The method of claim 62, wherein the mercerized and recovered 69. 1 cellulose floc has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-2 3 95 of greater than 1.3%. The method of claim 69, wherein the mercerized and recovered 70. 1 cellulose floc has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-2 95 of greater than 2.0%. 3 The method of claim 70, wherein the mercerized and recovered 1 71. cellulose floc has a solubility in 18% sodium hydroxide as determined by ASTM D 1696-2

1	72. The method of claim 62, wherein the mercerized and recovered		
2	cellulose floc has not been prehydrolyzed.		
1	73. The method of claim 62, wherein the mercerized and recovered		
2	cellulose floc has not been bleached with elemental chlorine.		
1	74. A cellulose floc prepared by the method of claim 62.		
1	75. A method of preparing cellulose ethers comprising the steps of:		
2	(a) selecting a desired viscosity for the cellulose ethers;		
3	(b) obtaining mercerized and recovered cellulose pulp having		
4	the appropriate viscosity for yielding cellulose ethers having the selected viscosity; and		
5	(c) converting the mercerized and recovered cellulose pulp to		
6	the cellulose ethers,		
7	wherein the mercerized and recovered cellulose pulp is substantially free of cellulose III,		
8	the cellulose pulp is southern softwood kraft, and the mercerized and recovered cellulose		
9	pulp has a TAPPI 230 om-89 viscosity of at most 12 cP.		
1	76. The method of claim 75, wherein when the cellulose ether prepared		
2	is hydroxyethyl cellulose, the mercerized and recovered cellulose pulp has a TAPPI 230		
3	om-89 viscosity less than 10.4 cP or greater than 11.2 cP.		
1	77. The method of claim 75, wherein the mercerized and recovered		
2	cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 169		
3	95 of greater than 2.3%.		
1	78. The method of claim 77, wherein the mercerized and recovered		
2	cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 1696-		
3	95 of greater than 3.0%.		

1	79. The method of claim 78, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 10% sodium hydroxide as determined by ASTM D 1696
3	95 of greater than 3.0%.
1	80. The method of claim 75, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696
3	95 of greater than 1.3%.
1	81. The method of claim 80, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696
3	95 of greater than 2.0%.
1	82. The method of claim 81, wherein the mercerized and recovered
2	cellulose pulp has a solubility in 18% sodium hydroxide as determined by ASTM D 1696
3	95 of greater than 4.0%.
1	83. The method of claim 75, wherein the mercerized and recovered
2	cellulose pulp has not been prehydrolyzed.
1	The method of claim 75, wherein the mercerized and recovered

cellulose pulp has not been bleached with elemental chlorine.